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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,306	01/22/2004	Hideya Konda	50395-244	3089

7590

09/30/2005

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Washington, DC 20005-3096

EXAMINER

CERULLO, JEREMY S

ART UNIT	PAPER NUMBER
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2112

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/761,306

Applicant(s)

KONDA ET AL.

Examiner

Jeremy S. Cerullo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20040524, 20040823
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-3 are pending in the following action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Admitted Prior Art ("AAPA") in view of U.S. Patent Application Publication No. 2003/0234776 ("Konishi") and U.S. Patent No. 6,062,740 ("Ohtsuka" et al.).

5. As for Claim 1, AAPA teaches an interface module for transmitting a digital video signal (Figure 4) comprising a transmitting interface unit (Figure 4A, Tx) designed to be

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attached to a digital visual interface (DVI) connector terminal of a host device outputting a video signal (Figure 4A, PC 1; Figure 4B, Host Device; Page 2 of the Specification), the transmitting unit having a cable connection consisting of 4 optical fibers for transmitting RGB and Clock signals (Figure 4, Item F). AAPA also teaches a receiving interface unit (Figure 4A, Rx) designed to be attached to a DVI connector terminal of a video output display unit (Figure 4A, Display 2; Figure 4B, Video Output Display Unit; Page 2 of the Specification) and having a cable connection consisting of 4 optical fibers for receiving RGB and Clock signals (Figure 4, Item F). In Figure 4C, AAPA also teaches that the length of the optical cable is greater than or equal to one fourth of the circumference of a circle whose radius corresponds to an allowable bend radius of the optical fiber cable (Figure 4C, Item F; Page 3 of the Specification). While AAPA teaches the use of 4 optical fibers, it does not teach the use of 4-core cable. However, Ohtsuka does teach the use of 4-core cable for transmitting signals using 4 fiber optic lines (Figure 1, Item 50; Column 4, Lines 35-51). It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a 4-core cable as taught by Ohtsuka instead of individual fibers in order to simplify installation of the cable. AAPA also does not teach a separate cable with female connectors for connecting the transmitting unit to the receiving unit. However, in order to be able to communicate over longer distances, one of ordinary skill in the art would have looked to existing methods of communication, such as transmission of video signal from a cable converter in one room of a house to a television in another room in the house. The cable converter connects to a first wall plate (a female connector), and the first wall plate is connected to

a second wall plate (another female connector), and the receiving television connects to the second wall plate to receive the signal. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a similar connection system with the fiber optic cables of AAPA and Ohtsuka to simplify longer distance communication. Also, neither AAPA nor Ohtsuka teach that a transmitting interface unit includes a built-in DDC signal generating means for outputting identification information associated with the video output display unit. However, Konishi teaches the use of a pseudo DDC generating unit within a PC so that the PC does not need to receive the identification information from the display unit (Figure 4, Item 35; Page 4, Paragraphs [0052]-[0054]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have included such a DDC generating unit as taught by Konishi in the transmitting interface unit of AAPA. This would allow the transmitting interface unit to be connected to a variety of different output devices and the output devices would not need to generate their own pseudo DDCs, nor would they need to receive the DDC over the fiber optic connection.

6. As for Claim 2, Konishi teaches the use of a switching circuit for selecting the source of the DDC signal, either from Display Apparatus D0, connected by wire, or from the Pseudo DDC generator for Display Apparatus D1, connected wirelessly. Please see Figure 4 and Paragraphs [0052]-[0054] on Page 4.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA, Konishi, and Ohtsuka as applied to claims 1 and 2 above, and further in view of U.S.

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Patent No. 4,262,641 ("Mosely" et al.). AAPA, Konishi, and Ohtsuka teach all of the limitations inherited from Claims 1 and 2, but they do not teach the added limitation that the DDC comprises an integrated circuit that generates a signal equivalent to a DDC signal. The pseudo DDC generating means of Konishi is a separate unit that generates a signal equivalent to a DDC signal (Page 4, Paragraphs [0052]-[0054]) but Konishi does not teach whether the unit is on an IC or not. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to have placed the pseudo DDC generation unit on an IC, because a single IC has the advantage of being highly reliable, relatively inexpensive, lends itself to manufacture into a relatively small module. (Column 1, Lines 28-34 of Mosely).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 5,100,219 ("Takahashi").

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (571) 272-3634. The examiner can normally be reached on Monday - Thursday, 8:00-4:00; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone


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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JSC



REHANA PERVEEN
PRIMARY EXAMINER
9/29/05